REMARKS

Claims 1-27 are pending in this application.

Initially, the applicants note, with appreciation, the indication that claims 4, 11, 18-20 and 27 have been indicated as being allowable if rewritten in independent form.

Claims 1, 2, 6-9, 13-17 and 21-26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilson (U.S. Patent No. 6, 885,667) in view of Sindhu et al (U.S. Patent No. 5,905,725; hereinafter Sindhu). The rejection is respectfully traversed.

Claim 1 recites a method for redirect checking in a network device that includes receiving a data packet on a first one of a plurality of interfaces. Claim 1 also recites determining whether the data packet originated from a station that is part of a same subnet as the next hop. The Office Action states that Wilson discloses this feature and points to Fig. 5, block 504 for support (Office Action – page 2). The applicants respectfully disagree.

Wilson at block 504 discloses that "the router determines that a redirect message must be sent by determining from routing table that next hop to reach the remote subnet is back out same interface that the packet was received on" (Wilson – Fig. 5). Wilson discloses that the router makes this determination by obtaining an address of the next hop from the routing table (Wilson – col. 5, lines 7-9). Wilson further discloses that the router then determines whether the next hop router and the host identified by the source address of the packet are on the same network (Wilson – col. 5, lines 10-13). While Wilson does disclose that the ultimate destination of the packet may be associated with a remote subnet (Wilson at col. 2, lines 7-13 and Fig. 5, block 504), Wilson merely discloses that the router determines whether "the next hop to reach the remote subnet is back out the

same interface that the packet was received on" (Wilson – col. 5, lines 13-15). Therefore, Wilson is performing a conventional process of determining whether the data packet is received and transmitted via the same interface. Wilson does not disclose or suggest determining whether the data packet originated from a station that is part of a same subnet as the next hop, as required by claim 1.

Claim 1 also recites generating a redirect message when the incoming interface index is equal to the outgoing interface index and the data packet originated from a station that is part of a same subnet as the next hop. Since Wilson does not disclose or suggest determining whether the data packet originated from a station that is part of a same subnet as the next hop, Wilson cannot disclose or suggest generating a redirect message when the incoming interface index is equal to the outgoing interface index and the data packet originated from a station that is part of a same subnet as the next hop. In contrast, Wilson merely discloses determining whether the data packet is received and transmitted via the same interface. As discussed in the applicants' specification, determining whether the data packet originated from a station that is part of a same subnet as the next hop may prevent the generation and transmission of unnecessary redirect messages, such as situations in which more than one subnet is coupled to the same interface.

Sindhu does not remedy the deficiencies in Wilson discussed above. Therefore, the combination of Wilson and Sindhu does not disclose or suggest each of the features of claim 1. Accordingly, withdrawal of the rejection and allowance of claim 1 are respectfully requested.

Claims 2, 6 and 7 are dependent on claim 1 and are believed to be allowable over the combination of Wilson and Sindhu for at least the reasons claim 1 is allowable. Accordingly, withdrawal of the rejection and allowance of claims 2, 6 and 7 are respectfully requested.

Claims 8, 15 and 22 recite features similar to, but not identical to claim 1. For reasons similar to those discussed above with respect to claim 1, the combination of Wilson and Sindhu does not disclose or suggest each of the features of claims 8, 15 and 22. Accordingly, withdrawal of the rejection and allowance of claims 8, 15 and 22 are respectfully requested.

Claims 9, 13, 14, 16, 17 and 21 variously depend on claims 8 and 15 and are believed to be allowable over the combination of Wilson and Sindhu for at least the reasons claims 8 and 15 are allowable. In addition, these claims recite additional features not disclosed or suggested by the combination of Wilson and Sindhu.

For example, claim 21 recites that when determining whether the data packet originated from a station that is part of a same subnet as the next hop, the output device is configured to generate a hash value using a portion of the source address of the data packet and compare the hash value to a predetermined hash value.

As to claim 21, the Office Action states that claim 21 recites essentially the same features as claim 3 and is therefore rejected for similar reasons (Office Action – page 6). The applicants note that claim 3 was rejected based on the combination of Wilson, Sindhu and O'Connell (U.S. Patent No. 6,922,410). Claim 21, however, was rejected based on the combination of Wilson and Sindhu. Therefore, clarification as to the grounds of rejection is respectfully requested in any subsequent

communication. In any event, the combination of Wilson and Sindhu does not disclose or suggest the features of claim 21.

In addition, as to claim 3, the Office Action admits that the combination of Wilson and Sindhu does not disclose generating a hash value and comparing the hash value to a stored hash value (Office Action – page 3). The Office Action, however, states that O'Connell discloses decoding network addresses with a hash table and points to Fig. 3 and col. 3, lines 35-40 for support (Office Action – page 4). O'Connell at col. 3, lines 35-40 discloses that the header part of a packet is employed in hashed form to lookup a pointer in a hash table. The mere fact that O'Connell discloses the use of a hash table cannot be fairly construed to disclose or suggest determining whether a data packet originated from a station that is part of a same subnet as the next hop, as required by claim 21. Therefore, even if O'Connell was combined with Wilson and Sindhu, the combination would not disclose or suggest each of the features of claim 21.

For at least these additional reasons, withdrawal of the rejection and allowance of claim 21 are respectfully requested.

Claim 23 recites a network device that includes, among other things, a memory configured to store an output interface index, a hash value and a prefix length value for each of a plurality of output interfaces. Claim 23 also recites processing logic configured to retrieve an output interface index, a hash value and a prefix length value based on the data forwarding information for the data packet, compare the incoming interface index and the outgoing interface index, generate a hash value using a number of bits of the source address of the data packet, based on the prefix length value, and compare the generated hash value to the stored hash value. As to claim 23, the Office

Action states that Wilson discloses a memory 1461 which holds the interface information and an interface unit 1468 with processors and memory which can be configured to perform the required logic (Office Action – page 4). The applicants note that the Office Action has not particularly addressed the features of claim 23 noted above. Therefore, a prima facie case under 35 U.S.C. § 103 has not been established with respect to claim 23.

The applicants also note that the Office Action with respect to claims 3 and 10 admits that neither Wilson nor Sindhu discloses generating a hash value and comparing the generated hash value with a stored hash value (Office Action – page 4). The Office Action, however, states that O'Connell discloses decoding network addresses with a hash table and points to Fig. 3 and col. 3, lines 35-40 for support (Office Action – page 4). O'Connell at col. 3, lines 35-40, as discussed above, discloses that the header part of a packet is employed in hashed form to lookup a pointer in a hash table. The mere fact that O'Connell discloses the use of a hash table cannot be fairly construed to disclose or suggest generating a hash value using a number of bits of the source address, based on a prefix length value stored in the memory. O'Connell also does not further disclose comparing a generated hash value to a hash value stored in the memory, as required by claim 23. Therefore, even if O'Connell was combined with Wilson and Sindhu, the combination would not disclose or suggest each of the features of claim 23.

For at least these reasons, withdrawal of the rejection and allowance of claim 23 are respectfully requested.

Claims 24-26 are dependent on claim 23 and are believed to be allowable for at least the reasons claim 23 is allowable. In addition, these claims recite additional features not disclosed or suggested by the combination of Wilson and Sindhu.

For example, claim 24 recites that when the incoming interface index and the outgoing interface index are equal and the generated hash value and the stored hash value are equal, the processing logic is further configured to indicate that a redirect message is required. Since none of Wilson, Sindhu and O'Connell discloses generating a hash value or comparing the generated hash value to a stored hash value, as recited in claim 23, the cited art cannot disclose or suggest that when the incoming interface index and the outgoing interface index are equal and the generated hash value and the stored hash value are equal, the processing logic is further configured to indicate that a redirect message is required, as recited in claim 24.

For at least these additional reasons, withdrawal of the rejection and allowance of claim 24 are respectfully requested.

Claims 3, 5, 10 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilson in view of Sindhu and further in view of O'Connell (U.S. Patent No. 6,922,410). The rejection is respectfully traversed.

Claims 3, 5, 10 and 12 variously depend on claims 1 and 8 and are believed to be allowable over the combination of Wilson, Sindhu and O'Connell for at least the reasons claims 1 and 8 are allowable. In addition, these claims recite additional features not disclosed or suggested by the cited art.

For example, claim 3 recites that the data packet includes a source address and the determining whether the data packet originated from a station that is part of a same subnet as the next hop includes selecting a number of the most significant bits of the source address of the data packet, passing the selected bits through a hash function to generate a hash value, comparing the generated hash value to a stored hash value, and determining that the data packet originated from a station that is part of the same subnet as the next hop when the generated hash value equals the stored hash value.

The Office Action admits that neither Wilson nor Sindhu discloses these features, but states that O'Connell discloses generating a hash value and comparing the generated hash value with a stored hash value (Office Action – page 4). As discussed above with respect to claim 23, O'Connell at col. 3, lines 35-40 discloses that the header part of a packet is employed in hashed form to lookup a pointer in a hash table. This portion of O'Connell has nothing to do with determining whether a data packet originated from a station that is part of a same subnet as the next hop, as required by claim 3. O'Connell, therefore, cannot be construed to disclose or suggest determining that a data packet originated from a station that is part of the same subnet as the next hop when the generated hash value equals the stored hash value, as recited in claim 3.

Therefore, even if O'Connell was combined with Wilson and Sindhu, the combination would not disclose or suggest each of the features of claim 3. For at least these additional reasons, withdrawal of the rejection and allowance of claim 3 are respectfully requested.

Claim 10 recites features similar to, but not identical to claim 3. For reasons similar to those discussed above with respect to claim 3, withdrawal of the rejection and allowance of claim 10 are respectfully requested.

CONCLUSION

In view of the foregoing remarks, the applicants respectfully request withdrawal of the outstanding rejections and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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